ATTACHMENT 1

DEQ Regional Office Boundaries

State Lead Contract Regional Groupings
Southwest Region + Blue Ridge Region
Valley Region
Northern Region
Piedmont Region + Tidewater Region

Regional Offices		Counties and Cities
Northern Regional Office	**Counties**	Arlington, Caroline, Culpeper, Fairfax, Fauquier, King George, Loudoun, Madison, Orange, Prince William, Rappahannock, Spotsylvania, Stafford, Louisa
	Cities	Alexandria, Falls Church, Fairfax, Fredericksburg, Manassas, Manassas Park
Piedmont Regional Office	**Counties**	Amelia, Brunswick, Charles City, Chesterfield, Dinwiddie, Essex, Gloucester, Goochland, Greensville, Hanover, Henrico, King and Queen, King William, Lancaster, Mathews, Middlesex, New Kent, Northumberland, Powhatan, Prince George, Richmond, Surry, Sussex, Westmoreland
	Cities	Colonial Heights, Emporia, Hopewell, Petersburg, Richmond.
Blue Ridge Regional Office	**Counties**	Amherst, Appomattox, Buckingham, Campbell, Charlotte, Cumberland, Halifax, Lunenburg, Mecklenburg, Nottoway, Prince Edward, Pittsylvania, Alleghany, Bedford, Botetourt, Craig, Floyd, Franklin, Giles, Henry, Montgomery, Patrick, Pulaski, Roanoke
	Cities	Danville, Lynchburg, Bedford, Clifton Forge, Covington, Martinsville, Radford, Roanoke, Salem
Valley Regional Office	**Counties**	Albemarle, Augusta, Bath, Clarke, Fluvanna, Frederick, Greene, Highland, Nelson, Page, Rockbridge, Rockingham, Shenandoah, Warren
	Cities	Buena Vista, Charlottesville, Harrisonburg, Lexington, Staunton, Waynesboro, Winchester
Southwest Regional Office	**Counties**	Bland, Buchanan, Carroll, Dickenson, Grayson, Lee, Russell, Scott, Smyth, Tazewell, Washington, Wise, Wythe
	Cities	Bristol, Galax, Norton
Tidewater Regional Office	**Counties**	Accomack, Isle of Wight, James City, Northampton, Southampton, York
	Cities	Chesapeake, Franklin, Hampton, Newport News, Norfolk, Portsmouth, Poquoson, Suffolk, Virginia Beach, Williamsburg

ATTACHMENT 2

CONTRACT PERFORMANCE AND REPORT SPECIFICATIONS

NOTE: For ALL Phases of investigative work, the following shall apply:

Title Page will include important identifying information concerning the site, such as Site Name, Site Address, Site Contact Name and Phone Number, Pollution Complaint number, date, and DEQ Case Manager, State Lead contractor performing the phase of work, contractor's address, phone #, and email.

Executive Summary. This section will include the site history information from the point of notification of the release to DEQ. Each successive report will add to this site history information. The purpose is to provide a progressive document in the event that a new DEQ or Contractor case manager is assigned to the case. Important historical information that is unknown to a new case manager may affect additional investigation and corrective action plans.

Topographic Map. Indicate site location. Denote Quad name(s) and major roads/route numbers if not clear or visible on the topographic map.

Site Maps. Each site usually needs two maps of different scale (site specific and a larger scale) in order to include the information as follows: Each map will include a scale, a north arrow and legend; all buildings and roads (labeled); all adjacent properties and associated buildings; all water supply wells and surface waters and utilities (if identified at that point); the entire UST system; sampling points/monitoring wells. The buildings and roads are expected to be located accurately in relation to each other. Wells and surface waters that are located greater than 500 feet away may be represented on the map with an arrow and distance from site. The above information is imperative for an accurate **Risk Assessment**.

Survey maps showing the locations of wells and the benchmarks used for surveying the well casings should be included in Site Characterization Reports and updated as new wells are installed at a site. These maps also should contain measurements showing well locations relative to specific landmarks.

Photographs. Required for most reports. Must include a description of the orientation of photo in relation to major structure or point for initial reports. Photos in subsequent reports may be necessary to verify work.

Receptor Survey. The site maps (site specific and a larger scale with adjoining properties and beyond, if warranted) will include the location of the receptors; however, in the presence of water supply wells, additional information is necessary. In areas with water supply wells, DEQ will require that the contractor present the name, address and phone number of the surrounding property owner(s), the type of water supply well(s) (drilled or bored), the depth of the well(s) (if known by owner), and the use of the well(s) (drinking, irrigation, or abandoned). The location and nature of all structures located above or in close proximity to the contaminant plume should be included in a receptor survey. This information is imperative for an accurate **Risk Assessment**.

Access Agreements must be presented with the report. If the owner of the property has changed, it is the responsibility of the contractor to inform DEQ case manager with the new contact information and a new Access Agreement immediately.

Conversation Logs. During the course of a Phase investigation, the contractor will have conversations with the RP, the property owner, neighbors and interested parties pertaining to the property and/or investigation. Due to the lack of transfer of this information to paper in the past, DEQ will require Conversation Logs to be completed and placed in the report appendices in order to ensure that this information is transmitted to DEQ.

Phases and Report types in order as presented in the Statement of Needs include:

Release Investigation
Alternate Water Supply (CAP Imp)
Initial Abatement
Site Characterization
Post SCR Monitoring
Phase II Initial Abatement
Corrective Action Plan (CAP)
Corrective Action Implementation (CAP Imp)
Site Closure

Tank Closure (CAP Imp)
Small Heating Oil Tank Removal (CAP Imp)

Emergency Response Report

Studies that may be incorporated into Site Characterization and Corrective Action Plan:

Complex Risk Assessment Modeling
Geophysical Exploration

Release Investigation Report

The following outline lists the **minimum** requirements of a Release Investigation Phase Project Report (or Letter). The Virginia DEQ reserves the right to disapprove contract deliverables based on incomplete or non-conclusive reporting.

I. Title Page
   a. Site Name
   b. Site Address
   c. Site Contact Name and Phone Number
   d. Pollution Complaint Number
   e. Date
   f. DEQ case manager

II. Signature Page
   a. Preparer's name, address, telephone and fax numbers
   b. Professional certification information (if applicable)

III. Executive Summary

IV. General Site Information
   a. Site description – reference photographs
   b. Site maps or updated site maps to include
      1. Topographic map indicating site location
      2. Site map with all buildings and roads (labeled)
      3. Larger scale site map with adjacent properties and buildings
      4. any supply wells, labeled potable or irrigation (include well construction information if available)
      5. utilities, above and below ground
      6. entire UST system (present and/or former)
      7. sampling points/monitoring wells

V. Release Investigation
   a. Soil and/or ground water sampling data
   b. System tightness test (if required by DEQ)
   b. Sensitive Receptor Survey
   d. Geologic information (bedrock, soils, structures, etc.)

VI. Release Information
   a. Description of source (cause of release)
   b. Type of product released
   c. Amount of product released (explain how amount was derived)
   d. Release history (when, how, where, duration)

VII. Appendices
   a. Certificate(s) of disposal
   b. Certificate(s) of analysis
   c. Applicable photographs
   d. Conversation logs

Alternate Water Supply (CAP Implementation)

In situations where drinking water supply wells have been impacted, it may be necessary to develop an Alternate Water Supply Corrective Action Plan. The actual implementation of an Alternate Water Supply is addressed under Alternate Water Supply Corrective Action Plan Implementation. There are some situations in which enough information exists in a Site Characterization Report or Addendum to proceed directly to the Implementation.

The following outline lists the **minimum** requirements of an Alternate Water Supply Report. The Virginia DEQ reserves the right to disapprove contract deliverables based on incomplete or non-conclusive reporting. The Contractor may be required to simply perform a study and propose an alternative water supply (Corrective Action Plan), or the Contractor may be required to complete an alternate water supply recommendation under the Site Characterization Report. Any alternate water supply furnished by the Contractor shall follow the guidelines for Corrective Action Plan Implementation.

I. Title Page
   a. Site Name
   b. Site Address
   c. Site Contact Name and Phone Number
   d. Pollution Complaint Number
   e. Date
   f. DEQ case manager

II. Signature Page
   a. Preparer's name, address, telephone and fax numbers
   b. Professional certification information (if applicable)

III. Executive Summary

IV. General Site Information
   a. Site description – reference photographs
   b. Site maps or updated site maps to include
      1. Topographic map indicating site location
      2. Site map with all buildings and roads (labeled)
      3. Larger scale site map with adjacent properties and buildings
   c. Water supply wells, labeled potable or irrigation (include construction information if available)
   d. Residential information (names, addresses, phone numbers)
   e. Nearest Public Water Supply
   f. Potential source(s) of contamination
   g. Sampling points/monitoring wells

V. Sampling (if required by DEQ of State Lead contractor)
   a. Duplicate samples shall be taken directly from the cold water tap at each residence/business.
   b. Turnaround time shall be 48 hours for all alternate water supply samples
   c. Chain-of-custody procedures are required
   d. Samples shall be analyzed by EPA methods 8260 & 8270. Samples will also be collected and analyzed for total lead, iron, and manganese. DEQ may request additional analyses as necessary. All analyses shall be conducted using EPA approved methods.
   e. Methods
   f. Detection Limits
   g. Results

VI. Water Supply Needs and Recommendations (for CAP)
   a. Estimated water usage
   b. Interim alternatives considered
   c. Permanent alternatives considered
      1. Water well replacement
      2. Public Water Supply hook-up
   d. Permanent alternatives selected
   e. Permanent cost estimates
      1. Water well replacement
      2. Public Water Supply hook-up
   f. Justification

VII. Water Supply Documentation for replacement well (if replacement well is approved Corrective Action)
   a. Completed GW-2 form
   b. Permit from Health Department
   c. Water sample results for bacteria
   d. Water sample results for petroleum constituents
   e. Site map showing the location of the new replacement well
   f. Data for replacement well
      1. well installation date
      2. well depth
      3. boring logs (if applicable)
      4. yield rate

VI. Appendices
   a. Field notes
   b. Certificate(s) of analysis
   c. Conversation logs.

Initial Abatement Report

The following outline lists the **minimum** requirements of an Initial Abatement Phase Project Report. The Virginia DEQ reserves the right to disapprove contract deliverables based on incomplete or non-conclusive reporting.

I. Title Page
   a. Site Name
   b. Site Address
   c. Site Contact Name and Phone Number
   d. Pollution Complaint Number
   e. Date
   f. DEQ case manager

II. Signature Page
   a. Preparer's name, address, telephone and fax numbers
   b. Professional certification information (if applicable)

III. Executive Summary

IV. General Site Information
   a. Site description – reference photographs
   b. Site maps:
      1. Topographic map indicating site location
      2. Site map showing
         a. all buildings and roads (labeled)
         b. any supply wells, labeled potable or irrigation
         c. utilities, above and below ground
         d. entire UST system (present and/or former)
         e. sampling points/monitoring wells
      3. Large scale site map with adjacent properties and buildings

V. Release Information
   a. a. Source of the release (cause of release)
   b. Type of product released
   c. Amount of product released (please explain how amount was derived)
   d. Release history (when, how, where, duration)
   e. Soil and/or ground water sampling data

VI. Initial Abatement Measures Taken
   a. Actions taken to prevent further release
   b. Hazard mitigation
   c. Free product recovery
   d. Actions taken to prevent further migration of contaminants
   e. Soil Management (if applicable)

VII. Appendices
   a. Certificate(s) of disposal
   b. Certificate(s) of analysis
   c. Applicable photographs
   d. Conversation logs

Site Characterization Report/Site Characterization Report Addendum

The following outline lists the **minimum** requirements of a Site Characterization Report and/or Addendum. The Virginia DEQ reserves the right to disapprove contract deliverables based on incomplete or non-conclusive reporting. Each study shall determine the sources(s) of the contamination, lateral and vertical degree and extent of contamination, including projected contaminant movement, delineation/projection of off-site impacts, physical state of the contaminants and their impact/potential impact to the groundwater. Complex modeling may be required by DEQ. This characterization shall be discussed in detail in the text, including supporting technical/analytical data and shall be graphically depicted.

The contractor must characterize risks to all present or known future receptors that are in contact with or are projected to come into contact with the constituents of concern. Risks must be evaluated using the procedures outlined in the DEQ Storage Tank Program Technical Manual or as directed by the DEQ Case Manager. The Contractor will be responsible for contacting the county or city Building Official's office in which the site is located to determine if any development is planned for the immediate area, and the results of that effort should be documented in the report. The risk assessment data shall, when appropriate, include health-based exposure levels, environmental standards, and temporal consideration of natural biodegradation occurring in the subsurface.

I. Title Page
   a. Site Name
   b. Site Address
   c. Site Contact Name and Phone Number
   d. Pollution Complaint Number
   e. Date
   f. DEQ case manager

II. Signature Page
   a. Preparer's name, address, telephone and fax numbers
   b. Professional certification information (if applicable)

III. Executive Summary

IV. Site Information and Assessment Summary
   a. Site, facility and release description (including source, type and quantity)
   b. Site maps:
      1. Topographic map indicating site location
      2. Site map showing
         a. all buildings and roads (labeled)
         b. any supply wells, labeled potable or irrigation
         c. utilities, above and below ground
         d. entire UST system (present and/or former)
         e. sampling points/monitoring wells
      3. Large scale site map with adjacent properties and buildings
   c. Tank data, if applicable (number of tanks, type, size, age, contents, status)
   d. Site specific geologic information (including soil and subsurface descriptions)
   e. Hydrologic information (including surface and ground water)

f. Complete delineation (displayed as isoconcentration maps) of all 4 phases of contamination (both vertical and horizontal descriptions) including:
    1. free product
    2. Absorbed or residual phase
    3. Dissolved phase
    4. Vapor phase (when significant)
    5. Projected plume movement
g. Boring logs, well logs, and well construction diagrams that include PID measurements, blow counts and depth to water
h. Discussion of photographs

V. Pilot Test Data (SCR Addendum & CAP)
a. Include amount of product removed, including product volatilized by soil vapor extraction or dual-phase type equipment.
b. Show analytical data and calculations for determining the product removed.
c. Include site map with diagram indicating monitoring wells/soil borings used for pilot study.

VI. Risk Assessment (See Section below for Quantitative Risk Assessment Elements)
a. Description of all on-site and off-site receptors including
b. Indexed map(s) showing receptors (i.e., number map and provide list of receptors)
c. Existing impacted human and biological receptors
d. Potentially impacted human and biological receptors.
e. All potable water wells that have been or may be impacted
f. Surface waters and non-potable wells (include construction information such as bored or drilled well and well depth if available)
g. Description of the exposure pathways (ingestion, inhalation, and dermal contact) for each receptor.
h. Risk-based endpoints
i. Current and projected land usage and current surrounding pollution (leaking tanks, spills, etc.)

VII. Remediation Assessment
a. Evaluation of site and risk assessment data
b. Presentation of whether or not additional site work is necessary (SCR Addendum)
c. Presentation of conclusions on the feasibility/potential for cleanup
d. Alternate water supply availability (if warranted)
e. Evaluation of appropriate remedial options (if necessary) including:
    1. site specific conditions
    2. achievable risk based endpoints
    3. estimated time frames
    4. estimated costs
    5. current/future beneficial results
f. Final recommendation and rationale for selection

VIII. Appendices
a. Certificate(s) of disposal
b. Certificate(s) of analysis
c. Applicable photographs
d. Conversation Logs

Quantitative Risk Assessment

I. Description of all on-site and off-site receptors including
   - A. Indexed map(s) showing receptors (i.e., number map and provide list of receptors)
   - B. Existing impacted human and biological receptors
   - C. Potentially impacted human and biological receptors.
   - D. All potable water wells that have been or may be impacted
   - E. Surface waters and non-potable wells.

II. Description of site specific means of exposure (ingestion, inhalation, and dermal contact) and remediation requirements, if applicable.

III. Quantitative Risks to known human receptors
   - A. Risk via each exposure pathway
     1. inhalation
     2. ingestion
     3. dermal contact
     4. fish consumption (if applicable)
   - B. Sum of risks for each receptor

IV. Risk-based endpoints for all applicable media and associated calculations

IV. Current and projected land usage and current surrounding pollution (leaking tanks, spills etc.)

Post Site Characterization Monitoring Report

The following outline lists the **minimum** requirements of a Post Site Characterization Monitoring Report. The Virginia DEQ reserves the right to disapprove contract deliverables based on incomplete or non-conclusive reporting. Each study shall re-state the delineation/projection of off-site impacts. Complex modeling may be required by DEQ. This monitoring shall be discussed in detail in the text, including supporting technical/analytical data and shall be graphically depicted.

I. Title Page
   a. Site Name
   b. Site Address
   c. Site Contact Name and Phone Number
   d. Pollution Complaint Number
   e. Date
   f. DEQ case manager

II. Signature Page
   a. Preparer's name, address, telephone and fax numbers
   b. Professional certification information (if applicable)

III. Executive Summary

IV. Site Information and Assessment Summary
   a. Site, facility and release description (including source, type and quantity)
   b. Site maps or updated site maps to include
      1. Topographic map indicating site location
      2. Site map with all buildings and roads (labeled)
      3. Larger scale site map with adjacent properties and buildings
      4. any supply wells, labeled potable or irrigation (include construction information)
      5. utilities, above and below ground
      6. entire UST system (present and/or former)
      7. sampling points/monitoring wells
   c. Hydrologic information (including surface and ground water)
   d. Complete delineation (displayed as isoconcentration maps) of all 4 phases of contamination (both vertical and horizontal descriptions) including::
      1. free product
      2. Adsorbed or residual phase
      3. Dissolved phase
      4. Vapor phase (when significant)
      5. Projected plume movement

V. Appendices
   a. Certificate(s) of disposal
   b. Certificate(s) of analysis

Phase II Initial Abatement Report

The following outline lists the **minimum** requirements of a Phase II Initial Abatement Report. The Virginia DEQ reserves the right to disapprove contract deliverables based on incomplete or non-conclusive reporting. This site work shall be approved after the submittal of the Site Characterization where the DEQ case manager has determined that excavation is the most reasonable remediation activity at the site. Soils excavated should not exceed the volumes specified in the DEQ Storage Tank Program Technical Manual. Larger quantities should be addressed under a Corrective Action Plan.

I. Title Page
   a. Site Name
   b. Site Address
   c. Site Contact Name and Phone Number
   d. Pollution Complaint Number
   e. Date
   f. DEQ case manager

II. Signature Page
   a. Preparer's name, address, telephone and fax numbers
   b. Professional certification information (if applicable)

III. Executive Summary

IV. Description of proposed corrective actions
   a. Narrative description
   b. Site maps or updated site maps to include
      1. Topographic map indicating site location
      2. Site map with UST system, all buildings and roads (labeled)
      3. Larger scale site map with adjacent properties, buildings, supply wells, streams, utilities
      4. Map(s) showing location(s) of proposed excavation; include location of monitoring wells and soil borings.
      5. Include proposed vertical and horizontal dimensions for soil excavation and include analytical upon which the dimensions were proposed.
   c. Discussion of remediation goal.

V. Propose subsequent monitoring schedules
   a. Parameters
   b. Frequency
   c. Locations
   d. Media
   e. Methods

VI. Reporting Schedule
   a. Periodic monitoring
   b. Annual Reports
   c. Emergency reports
   d. Free product removal reports

VII. Description of contaminated material generated by the excavation and method(s) used to treat/dispose that material.

VIII. Appendices
   a. Certificate(s) of disposal
   b. Certificate(s) of analysis
   c. Applicable photographs
   d. Conversation logs

Corrective Action Plan

The following outline lists the **minimum** requirements of a Corrective Action Plan Report. The Virginia DEQ reserves the right to disapprove contract deliverables based on incomplete or non-conclusive reporting. Corrective actions shall be in accordance with all applicable regulations and current DEQ guidance. Specifically the corrective action plan shall outline the measures employed to remediate the site.

I. Title Page
   a. Site Name
   b. Site Address
   c. Site Contact Name and Phone Number
   d. Pollution Complaint Number
   e. Date
   f. DEQ case manager

II. Signature Page
   a. Preparer's name, address, telephone and fax numbers
   b. Professional certification information (if applicable)

III. Executive Summary

IV. Description of proposed corrective actions
   a. Narrative description
   b. Site maps or updated site maps to include
      1. Topographic map indicating site location
      2. Site map with UST system, all buildings and roads (labeled)
      3. Larger scale site map with adjacent properties, buildings, supply wells, streams, utilities
      4. Map(s) showing locations of planned remedial actions and major system components (e.g. monitoring and recovery wells, system housing, effluent discharge, etc.), replacement potable well location
      5. Pilot Test Data (for SCR Addendum, CAP also)
         a. Include amount of product removed, including product volatilized by soil vapor extraction or dual-phase type equipment.
         b. Show analytical data and calculations for determining the product removed.
         c. Include site map with diagram indicating monitoring wells/soil borings used for pilot study.
   c. Remediation Sketches/plans/well replacement location(s)
   d. System Design calculations

V. Endpoints
   a. List of numerical endpoints for all phases of contamination
      1. free phase
      2. dissolved phase
      3. residual phase
      4. vapor phase
      5. system effluent
   b. Justification of each endpoint (how was each endpoint derived)

VI. Operational and post-operational monitoring schedules
   a. Parameters
   b. Frequency
   c. Locations
   d. Media
   e. Methods

VII. Reporting Schedule
   a. Periodic monitoring
   b. Annual Reports
   c. Emergency reports
   d. Free product removal reports

VIII. Description of contaminated material generated by the proposed corrective action (if applicable and method(s) proposed to treat/dispose that material.

IX. Proposed actions to notify persons affected by release and/or corrective actions (public notice)

X. Permitting requirements
   a. What permits are required before the proposed corrective actions may be implemented?
   b. What actions are necessary to obtain the necessary permits?

XI. Projected costs to achieve remedial endpoints

XII. Estimated length of time to achieve endpoints. Discuss methodology used to derive this information and show calculations.

XIII. Propose alternative corrective action if the primary corrective action is later determined to be inadequate.

XIV. Appendices
   a. Certificate(s) of disposal
   b. Certificate(s) of analysis
   c. Water well completion report (if applicable)
   d. Applicable photographs
   e. Conversation logs

Site Closure Report

I. Title Page
   - A. Site Name
   - B. Site Address
   - C. Site Contact Name and Phone Number
   - D. Pollution Complaint Number
   - E. Date
   - F. DEQ case manager

II. Signature Page
   - A. Preparer's name, address, telephone and fax numbers
   - B. Professional certification information (if applicable)

III. Executive Summary

IV. General Site Information
   - A. Site description – reference photographs
   - B. Site maps or updated site maps to include
     1. Topographic map indicating site location
     2. Site map with all buildings and roads (labeled)
     3. Larger scale site map with adjacent properties and buildings
     4. any supply wells, labeled potable or irrigation
     5. utilities, above and below ground
     6. entire UST system (present and/or former)
     7. sampling points/monitoring wells

V. Release Information

VI Closure Information
   - A. Updated Future Land Use
   - B. Well Abandonment Procedures
   - C. Removal of Remediation System Components
   - D. Disposal of Investigation Derived Wastes
   - E. Site Restoration Procedures

Appendix
   Conversation Logs

Tank Closure Report

The following outline lists the basic **minimum** requirements of a Tank Closure Report (or Letter). The Virginia DEQ reserves the right to disapprove contract deliverables based on incomplete or non-conclusive reporting.

I. Title Page
   a. Site Name
   b. Site Address
   c. Site Contact Name and Phone Number
   d. Pollution Complaint Number
   e. Date
   f. DEQ case manager

II. Signature Page
   a. Preparer's name, address, telephone and fax numbers
   b. Professional certification information (if applicable)

III. Executive Summary

IV. General Site Information
   a. Site description – reference photographs
   b. Site maps or updated site maps to include
      1. Topographic map indicating site location
      2. Site map with all buildings and roads (labeled)
      3. Larger scale site map with adjacent properties and buildings
      4. any supply wells, labeled potable or irrigation
      5. utilities, above and below ground
      6. entire UST system (present and/or former)
      7. sampling points/monitoring wells

V. Release Information
   a. Description of source (cause of release – tank, dispenser, piping, etc.)
   b. Type of product released
   c. Soil and/or ground water sampling data

VI. Appendices
   a. a copy of the completed Notification Form 7530-1 for regulated USTs (form may be found at www.virginia.gov in the Petroleum Tank Program Download Library). The ORIGINAL FORM should be paper clipped to the inside back of the report.
   b. Building Permit for closure, inspector notes
   c. Certificate(s) of analysis
   d. Certificate(s) of all disposal manifests (sludge, contaminated soil and/or water, UST/AST)
   e. Conversation logs
   f. Photographs.

Small Heating Oil Tank Removal

The following outline lists the basic **minimum** requirements of a Tank Closure Report (or Letter). The Virginia DEQ reserves the right to disapprove contract deliverables based on incomplete or non-conclusive reporting.

I Title Page
- a. Site Name
- b. Site Address
- c. Site Contact Name and Phone Number
- d. Pollution Complaint Number
- e. Date
- f. DEQ case manager

II. Signature Page
- a. Preparer's name, address, telephone and fax numbers
- b. Professional certification information (if applicable)

III. Executive Summary

IV. General Site Information
- a. Site description – reference photographs
- b. Site maps or updated site maps to include
    1. Topographic map indicating site location
    2. Site map with tank(s), all buildings and roads (labeled)
    3. any supply wells, labeled potable or irrigation
    4. sampling points/monitoring wells

V. Release Information
- a. Description of source (cause of release – tank, dispenser, piping, etc.)
- b. Type of product released
- c. Soil and/or ground water sampling data

VI. Appendices
- a. Building Permit for closure, inspector notes
- b. Certificate(s) of analysis
- c. Certificate(s) of all disposal manifests (sludge, contaminated soil and/or water, UST/AST)
- d. Conversation logs
- e. Photographs.

Emergency Response Report

The following outline lists the basic **minimum** requirements of an Emergency Response Report. The Virginia DEQ reserves the right to disapprove contract deliverables based on incomplete or non-conclusive reporting.

I. Title Page
   a. Site Name
   b. Site Address
   c. Site Contact Name and Phone Number
   d. Pollution Complaint Number
   e. Date
   f. DEQ case manager

II. Signature Page
   a. Preparer's name, address, telephone and fax numbers
   b. Professional certification information (if applicable)

III. Executive Summary

IV. General Site Information
   a. Site description – reference photographs
   b. Site maps or updated site maps to include
      1. Topographic map indicating site location
      2. Site map with all buildings and roads (labeled)
      3. Larger scale site map with adjacent properties and buildings
      4. any supply wells, labeled potable or irrigation
      5. utilities, above and below ground
      6. entire UST system (present and/or former)
      7. sampling points/monitoring wells

V. Release Information
   a. Description of source of (cause of release)
   b. Type of product released
   c. Amount of product released (please explain how amount was derived)
   c. Release history (when, how, where, duration)

VI. Soil and/or ground water sampling data

VII. Initial Abatement Measures Taken
   a. Actions taken to prevent further release
   b. Hazard mitigation
   c. Free product recovery
   d. Actions taken to prevent further migration of contaminants

VIII. Soil Management (if applicable)

IX. Appendices

a. Certificate(s) of disposal
b. Certificate(s) of analysis
c. Applicable photographs
d. Conversation logs

Geophysical Exploration Report

The following outline lists the basic **minimum** requirements of a Geophysical Exploration Report. This model may be included in an SCR, SCR Addendum or as a stand-alone document. Geophysical methods may include seismic refraction/reflection, electromagnetic survey, and high or low frequency electrical resistivity surveys. The Virginia DEQ reserves the right to disapprove contract deliverables based on incomplete or non-conclusive reporting.

I. Title Page
   a. Site Name
   b. Site Address
   c. Site Contact Name and Phone Number
   d. Pollution Complaint Number
   e. Date
   f. DEQ case manager

II. Signature Page
   a. Preparer's name, address, telephone and fax numbers
   b. Professional certification information (if applicable)

III. Executive Summary

III. General Site Information

IV. Site description

V. Site maps or updated site maps to include
   a. Topographic map indicating site location
   b. Site map with all buildings and roads (labeled)
   c. Larger scale site map with adjacent properties and buildings
   d. any supply wells, labeled potable or irrigation
   e. utilities, above and below ground
   f. entire UST system (present and/or former)
   g. sampling points/monitoring wells

VI. Geophysical Method Discussion

VII. Geophysical Data Discussion
   a. Map with data points
   b. Data interpretation

VII. Appendices
   a. Field survey data

ATTACHMENT 3

DATA SHEETS, ORGANIZATIONAL CHART, RESUMES, AND PROJECT EXPERIENCE

General Information

1. Date Prepared:
2. Name of Firm/Business Address/type of ownership:
3. Year Firm (above) established:
4. Name of parent company (if applicable):
5. Names/titles/phone numbers of two principals of the firm:
6. Present office(s):
7. Personnel/discipline/office

Organizational Chart

Include a one-page organizational chart for each firm submitting a data sheet.

Resumes

1. Name/title:
2. Project assignment:
3. Name of firm with whom associated:
4. Years with current firm/with other firms doing similar work:
5. Education: degree(s)/year obtained/specialization
6. Active Registration(s): year first registered/discipline
7. Other experience and qualifications relevant to this solicitation

Project Experience

8. Project Name and Location:

9. Description of project and Responsibility of firm:

10. Client name/address/contact/phone number:

11. % complete:

12. Total cost of project/ % for which firm was responsible:

OFFEROR DATA SHEET

Note: The following information is required as part of your response to this solicitation. Failure to complete and provide this sheet may result in your proposal being scored lower.

1. Qualification: The vendor must have the capability and capacity in all respects to satisfy fully all of the contractual requirements.

2. Vendor's Primary Contact:

   Name: _____ Phone: _____

3. Years in Business: Indicate the length of time you have been in business providing this type of good or service:

   _____ Years _____ Months

4. Vendor Information:

   eVA Vendor ID or DUNS Number: _____

5. Indicate below a listing of at least four (4) current or recent accounts, either commercial or governmental, that your company is servicing, has serviced, or has provided similar goods. Include the length of service and the name, address, and telephone number of the point of contact.

   A. Company:_____Contact: _____

   Phone:(_____)_____ Fax: (_____)_____

   Project:_____

   Dates of Service: _____$ Value: _____

   B. Company_____ Contact: _____

   Phone:(_____)_____ Fax: (_____)_____

   Project:_____

   Dates of Service: _____$ Value: _____

   C. Company:_____ Contact: _____

   Phone:(_____)_____Fax:(_____)_____

   Project:_____

   Dates of Service: _____$ Value: _____

   D. Company:_____Contact: _____

   Phone:(_____)_____Fax:(_____)_____

   Project:_____

   Dates of Service: _____$ Value: _____

I certify the accuracy of this information.

Signed: _____Title: _____ Date: _____

ATTACHMENT 4

LABOR CLASSIFICATIONS

Professional Personnel Task Descriptions

The table below is a listing of the professional classifications and their associated tasks and is used to evaluate costs claimed for reimbursement from the Fund. In order to evaluate professional charges, the tasks, which were performed by the claimed personnel, will be used to determine the appropriate professional classification and the rate at which the personnel will be reimbursed. The "Typical qualifications" listed under the personnel title are to be used for informational purposes only and will not be used as a basis for determining the rate for reimbursement. It is recognized that there may be circumstances, which require personnel of a higher classification to perform tasks of a lower level professional. In these cases, justification may be required prior to approval; particularly where over-qualified staff is consistently used to perform lower level professional tasks.

Professional Classification	Tasks and Responsibilities
Principal (Principal Engineer/Geologist) Typical qualifications: BA/BS degree in engineering, geology, or other related science and/or related professional registration with at least 15 years of applicable experience.	Plans and directs all aspects of an organization's policies, objectives, and initiatives. Acts as administrative and/or professional head of company with authority and responsibility to negotiate and sign contracts, conceive and execute plans and direct professional staff. Normally has a financial interest in the company as partial owner, investor, or stockholder responsible for the short and long-term profitability and growth of the company. May charge a limited (less than 5%) number of hours to a project or program. May serve as technical expert or coordinator of large or technically challenging projects and provide final review of project documents, which legally bind the company. Relies on extensive experience and judgment to plan and accomplish goals. Leads and directs the work of others. A wide degree of creativity and latitude is expected. The principal should rarely bill field time at the principal's regular hourly rate. • Negotiate, review, execute contracts • Directs all aspects of company • Oversee large and complex projects • Limited review of technical reports and new technologies
Senior Level Professional Typical qualifications: BA/BS degree in engineering, geology, or other related science and/or applicable professional registration (geology or engineering) with minimum 8 years of experience.	Responsible for final review/approval of designs, reports, plans, and specifications. Responsible for preparing reports, plans and specifications for complex projects, including Site Characterization, Corrective Action Plans, modeling, and remediation budgets. Has experience in technical and managerial roles and substantial expertise in remediation of complex sites. Familiar with field concepts, practices, and procedures. Relies on experience and judgment to plan and accomplish goals. Performs a variety of complicated tasks. May supervise or direct the work of lower level professional staff. A wide degree of creativity and latitude is expected. Typically reports to Principal. • Oversee large and complex projects • Prepares SCR and CAPs Final review of technical reports and CAPs • Develop project budgets • Equipment specification review, selection, and design • Hydrogeologic and contaminate modeling • Data review and analysis

Professional Classification	Tasks and Responsibilities
Project Manager Typical qualifications: BA/BS degree in engineering, geology, or other related science with minimum 4 years of applicable experience and necessary health and safety training.	Responsible for managing remediation projects and controlling project budgets. Serves as on-sight technical expert. Analyzes and interprets data, supervises field tests, and may prepare limited or certain technical sections of reports. Supervises the work of lower level professional and technical staff. Field hours are normally limited to periodic site visits. Responsible for organizing highly complex activities for the development, implementation, and maintenance of projects. Reports to Principal or Senior Professional. • Project management • Report Preparation - Limited or certain technical sections • Oversee project budgets • Data review and analysis • Field work planning • Work plan preparation • On-site direction, coordination, and management • Coordinate with agency, client, and subcontractors • Periodic site inspection • Acquire site access
Mid-Level Professional Typical qualifications: BA/BS degree in engineering, geology, or other related science, minimum 2 years of applicable experience, and necessary health and safety training.	Implements field work, gathers technical and hydrogeologic information. Performs monitoring well installation and sampling. Writes field notes, aids in geological mapping, and geological analysis. Provides -site technical support. May supervise lower level professionals and technical personnel during site remediation activities such as soil or tank removal. Substantial number of hours are for field work. Reports to Project Manager. • Report preparation • Field work preparation and planning • Monitoring activities • Remediation system installation • Oversee soil boring and monitoring well installation • Site reconnaissance and mapping • Supervise UST removal, soil removal and other site remediation activities • Waste characterization • Acquire site access • Assist in modeling and data analysis
Junior Level Professional Qualifications: Entry level professional position; BA/BS degree in engineering, geology, or other related science and 0-2 years of applicable experience.	Works under appropriate supervision when performing all but routine field tasks related to the project. Performs monitoring well installation and sampling. Writes field notes, aids in geological mapping, and basic geological analysis. Assists with reports preparation only under supervision/review. Performs limited data review and analysis. May supervise lower level technical personnel. Substantial number of hours are typically for field work. Reports to Project Manager. • Field work preparation • Limited data review and analysis • Assists with remediation system installation •
Senior Technician Typical qualifications: high school diploma or Associate degree, or certified or licensed tradesman; 2 years of related experience and necessary health and safety training.	Responsible for on-site supervision of installation, maintenance, and repair of machinery and equipment. Maintains field logs and documentation of monitoring and maintenance of machinery and equipment. May supervise other technicians and/or lower level professionals. Works under appropriate supervision. Substantial number of hours are for field work. Reports to Project Manager. • Operation and maintenance of equipment • Maintains field/sampling logs • Maintains equipment maintenance records

Professional Classification	Tasks and Responsibilities
Technician Typical qualifications: high school diploma or trade school degree typically required; 1 year of job related training, and necessary health and safety training.	Performs routine tasks such as soil and ground water monitoring, well bailing, and supporting roles for Senior Technician. Hours are for field work Reports to Project Manager. • Well development • Waste handling • Sampling and monitoring • Decontamination • Well abandonment
CAD Operator May require an associate's degree in a related area and 0-2 years of experience in the field or in a related area.	Transforms initial rough product designs and sketches into finished documents using computer aided design (CAD). Has knowledge of commonly used concepts, practices, and procedures. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Reports to Project Manager. • Generate new drawings • CAD work • Cartography • Advanced drafting • Iso-concentration maps
Clerical May require an associate's degree or its equivalent.	Performs office functions, including but not limited to clerical work, word processing, data maintenance, report filing, telecommunications response, document reproduction, filing, labeling, spreadsheets, mailing and drafting transmittal correspondence. Establishes work procedures and standards to improve efficiency. Familiar with a variety of the field's concepts, practices, and procedures. Reports to a Project Manager. • Typing • Document reproduction • Report generation • Filing • Word processing • Mailing • Spreadsheets • General clerical duties

ATTACHMENT 5

SMALL BUSINESS SUBCONTRACTING PLAN

Definitions

Small Business: "Small business " means a business, independently owned or operated by one or more persons who are citizens of the United States or non-citizens who are in full compliance with United States immigration law, which, together with affiliates, has 250 or fewer employees, or average annual gross receipts of $10 million or less averaged over the previous three years.

Women-Owned Business: Women-owned business means a business concern that is at least 51% owned by one or more women who are citizens of the United States or non-citizens who are in full compliance with United States immigration law, or in the case of a corporation, partnership or limited liability company or other entity, at least 51% of the equity ownership interest is owned by one or more women who are citizens of the United States or non-citizens who are in full compliance with United States immigration law, and both the management and daily business operations are controlled by one or more women who are citizens of the United States or non-citizens who are in full compliance with the United States immigration law.

Minority-Owned Business: Minority-owned business means a business concern that is at least 51% owned by one or more minority individuals or in the case of a corporation, partnership or limited liability company or other entity, at least 51% of the equity ownership interest in the corporation, partnership, or limited liability company or other entity is owned by one or more minority individuals and both the management and daily business operations are controlled by one or more minority individuals.

All small businesses must be certified by the Commonwealth of Virginia, Department of Minority Business Enterprise (DMBE) by the due date of the solicitation to participate in the SWAM program. Certification applications are available through DMBE online at www.dmbe.virginia.gov (Customer Service).

Offeror Name: _____

Preparer Name: _____ **Date:** _____

Instructions

A. If you are certified by the Department of Minority Business Enterprise (DMBE) as a small business, complete only Section A of this form. This shall not exclude DMBE-certified women-owned and minority-owned businesses when they have received DMBE small business certification.

B. If you are not a DMBE-certified small business, complete Section B of this form. For the proposal to be considered and the offeror to be declared responsive, the offeror shall identify the portions of the contract that will be subcontracted to DMBE-certified small business in Section B.

Section A

If your firm is certified by the Department of Minority Business Enterprise (DMBE), are you certified as a (**check only one below**):

_____ Small Business

_____ Small and Women-owned Business

_____ Small and Minority-owned Business

Certification number: _____ Certification Date: _____

Section B

Populate the table below to show your firm's plans for utilization of DMBE-certified small businesses in the performance of this contract. This shall not exclude DMBE-certified women-owned and minority-owned businesses that have received the DMBE small business certification. Include plans to utilize small businesses as part of joint ventures, partnerships, subcontractors, suppliers, etc.

B. Plans for Utilization of DMBE-Certified Small Businesses for this Procurement

Small Business Name & Address DMBE Certificate #	Status if Small Business is also: Women (W), Minority (M)	Contact Person, Telephone & Email	Type of Goods and/or Services	Planned Involvement During Initial Period of the Contract	Planned Contract Dollars During Initial Period of the Contract
Totals $					

Attachment 6

State Lead Activity Authorization Form

Virginia Department of Environmental Quality

State Lead Activity Authorization Form

Site Name		PC#		Contract (chose from list):		R.O. & cost code (chose from list):			
Phase:		Date Assigned:				Report Due Date:			
Consultant fax #				consultant email					
Code	Description	Unit type	Contract Unit Price	Proposed Units	Contingent Units	Work Performed Units	DEQ Verified Units	Projected Maximum Cost	Actual Cost
Activity:									
							Subtotal:		

Authorization to Proceed

Authorization to Pay

Sign _____ _____ _____ _____

contractor's signature date DEQ Signature date

_____ _____

DEQ Signature date

Page _____ of _____

PC#		Phase:							
Code	Description	Unit type	Contract Unit Price	Proposed Units	Contingent Units	Work Performed Units	DEQ Verified Units	Projected Maximum Cost	Actual Cost
Activity:									
							Subtotal:		

Authorization to Proceed

Sign ______________________ ________
contractor's signature date

______________________ ________
DEQ Signature date

Authorization to Pay

______________________ ________
DEQ Signature date

PC#		Phase:					
Notes:							
DEQ Use Only:							
						Projected	**Actual**
					Grand Total:		
					DEQ Verified Total:		

Name _____ _____ _____

contractor request to proceed Contractor Signature date

Name _____ _____ _____

DEQ authorization to proceed DEQ Case Manager Signature date

DEQ authorization to Pay

Name _____ _____ _____

DEQ Case Manager Signature DEQ Case Manager Signature date

*** subcontractor invoices must be attached and initialed

Rev. 11/3/09

ATTACHMENT 7

STATE LEAD PETROLEUM CLEANUP ACTIVITY VERIFICATION FORM

TO BE COMPLETED BY DEQ RO…
Attached is the Activity Authorization Form for:

Site Name:_____Phase: _____

PC#:_____ Contractor:_____

RO Cost Code*:_____ Project #:_____

Provide initials in the blanks as appropriate:

_____ I have reviewed the Report for this phase of corrective action, and it meets the requirements established by the State Lead contract.

_____ I have reviewed the report for this phase of corrective action, and no work performed exceeds the pre-authorized units except as noted below.

_____ I have reviewed the Contract Unit Rate amounts, and no rates exceed the rates established by the Sate Lead contract for this contractor.

_____ I have reviewed the Actual Cost for each Task and Time and Materials Codes, and the Actual Cost was calculated correctly for each Task and Time and Material Code (i.e., Work Performed Units x Contract Unit Price = Actual Cost).

_____ I have reviewed each "at-cost" item, and the items and units are appropriate. The costs are adequately supported by subcontractor invoices for all "at-cost" items greater than $50.00.

_____ I have reviewed the Total Actual Cost, and it is a correct and accurate summation of Actual Cost for each Task Code, Time and Material Codes, and at-cost item.

_____ Approved and signed AAFs plus supporting subcontractor invoices are attached.

General Comments:

Total Actual Cost Approved for:

Payment $_____Approved by:_____Date:_____

RO Distribution: DEQ Finance (Attn: Karen Meador)
SL Contractor

*Payments from CO cost center (611) require OSRR approval. Send VAAF to OSRR. OSRR will forward to OFM upon approval.

TO BE FILLED OUT BY DEQ FINANCE

CONTRACTOR: _____ **CONTRACT NUMBER:** _____

PAYMENT:

AMOUNT: $_____

VOUCHER #: _____

DATE: _____

CODING: _____ Project: 83702Fund: 0748

_____ Project: 63715Fund: 0748

_____ Project: 63715Fund: 1000

DISTRIBUTION:

701 SWRO Chad Quesenberry
704 BRRO-R Rob Howard
707 BRRO-L Joey Daniel/David Kirby
710 TRO LeAnn Moran
713 PRO Heather Evans
716 NVRO Dawn Woodard
719 VRO David Forrer
611 OSRR James Barnett

ATTACHMENT 8

TASK DESCRIPTIONS

Code	Task
T002	**Monitor For Vapor Hazards:** This SOW consists of the personnel time for a Junior Level Professional and appropriate equipment to monitor vapors or free product (liquid phase) that have migrated from the point of release and entered into subsurface structures such as sewers, basements, utility vaults, aboveground enclosed structures, etc. The cost for this SOW is based on the personnel time and use of an explosimeter and PID/HNU.
T004	**Emergency Mitigation Of Vapor Hazards – Operation And Maintenance:** This SOW consists of personnel time for a Senior Technician and appropriate equipment to monitor and reduce the immediate danger without creating a new or different hazard. The cost for this SOW is based on the use of a combustible gas/O_2 meter and a vapor extraction blower and assumes electrical power is available.
T006	**Free Product (Liquid Phase) Recovery From A Monitoring Well – Manual:** This SOW consists of personnel time for a Senior Technician and appropriate equipment to hand-bail free product from a monitoring well. The cost for this SOW is based on the use of a bailer, oil-water interface probe, and a 55-gallon steel drum. This SOW also includes recording and tabulating the total amount of free product removed.
T007	**Install Boom in Surface Waters:** This SOW consists of personnel time for a Junior-Level Professional and two Laborers and equipment to install sorbent materials across portions of a stream or other water body impacted by a petroleum product. The cost for this SOW is based on the use of four 10- foot sorbent booms, a box of sorbent pads, polypropylene rope, and steel fence posts. This SOW also includes downstream inspection of possible health risks or environmental impacts from the petroleum release.
T008	**Bottled Water With Bottled Water Dispenser:** This SOW consists of the costs associated with the utilization of bottled water and a hot/cold bottled water dispenser as a temporary alternate water supply. This SOW is based on the cost for delivery and rental of a hot/cold bottled water dispenser and four 5-gallon water bottles per week.
T012	**Thermal Desorption or Bio-remediation of Less Than 250 Tons of Petroleum Contaminated Soils:** This SOW consists of off-site thermal desorption or bio-remediation of less than 250 tons petroleum-contaminated soil. Quantities greater than 250 tons require bidding soil transport and treatment. This SOW does not include the cost for required pre-treatment laboratory analyses. Required pre-treatment analyses may be pre-approved from the Material UCR Rate Table and claimed separately. **See Section 2.6 for instructions on claiming mark-up.** *If the soil treatment company invoices a minimum charge for treating small quantities, do not use T012 to claim soil treatment costs. Claim the soil treatment costs using an X-code. See Section 2.4.2 for information about X-codes.*

Code	Task
T014	**Site Reconnaissance/Initial Site Map:** This SOW consists of personnel time for a Junior Level Professional to conduct a site inspection and a CAD Operator to generate a scale site map displaying features of the immediate site, adjacent parcels, and nearby properties. The site map must note the location of tanks, dispensers, monitoring wells, borings, and other pertinent site features. The location of potential migration pathways such as utility lines, storm and sanitary sewers, catch basins, and drainage ditches must also be noted. The map should suffice for the development of a Health and Safety Plan and for locating assessment and remediation activities. This Task is not applicable for crude or hand-drawn maps which are not to scale.
T015	**Underground Storage Tank (UST) System Tightness Testing For Leak Confirmation:** This SOW consists of testing UST system (tank and lines) tightness above and below the product level using a method meeting requirements outlined in the UST technical regulations. The cost for this SOW includes all labor and equipment necessary to complete the testing. The number of UST systems to be tested must be specified. The purchase of product for testing is a non-reimbursable expense. This SOW also includes preparing a tank tightness test report.
T018	**Boom Inspection:** This SOW consists of personnel time for a Junior Level Professional and a Laborer and equipment to inspect booms placed in surface water for petroleum containment. The cost for this SOW includes the use of necessary hand tools and the time for downstream inspection of potential health risks or environmental impacts from the petroleum release.
T019	**Boom Replacement:** This SOW consists of personnel time for a Technician III and a Laborer and equipment (booms, pads, rope) to replace and/or repair sorbent booms and pads placed in surface waters for petroleum containment. This SOW includes the cost for the use of necessary hand tools and a steel drum for disposal.
T023	**Drill Rig Mob/Demob:** This SOW consists of transportation of a drill rig and drill crew to and from the site.
T024	**Soil Boring with Drill Rig - 5 foot Sampling Interval:** This SOW includes one drill rig and a crew to advance soil borings using hollow-stem augers, and split spoon sampling every five feet with a two-inch split spoon. Also included in this SOW is all necessary field equipment to complete the borings (decontamination fluids and equipment, expendables) and time to decontaminate equipment and relocate the rig between borings. This SOW does not include analytical or mobilization costs. This task is only for dedicated soil borings and should not be used when a soil boring is converted to a monitoring well. Instead use the appropriate task T025 through T027.

Code	Task
T025	**Monitoring Well Installation - Two-inch Diameter:** This SOW includes the installation of two-inch PVC monitoring wells. The cost for this SOW is based on the cost for drilling with a hollow stem auger and soil sampling every five feet using two-inch diameter split spoons. It includes all well completion materials, watertight locking manhole covers, concrete pad, decontamination equipment and supplies, and the personnel time and equipment to develop the well. This Task does not include the cost to log the well, screen and collect soil samples (see T028).
T026	**Monitoring Well Installation – Four-Inch Diameter:** This SOW includes the installation of four-inch PVC monitoring wells. The cost for this SOW is based on the cost for drilling with a hollow stem auger and soil sampling every five feet using two-inch diameter split spoons. It includes all well completion materials, watertight locking manhole covers, concrete pad, decontamination equipment and supplies, and the personnel time and equipment to develop the well. This Task does not include the cost to log the well, screen and collect soil samples (see T028).
T027	**Recovery Well Installation – Six-Inch Diameter:** This SOW includes the installation of six-inch PVC recovery wells. The cost for this SOW is based on drilling with a hollow stem auger, all well completion materials, watertight locking manhole covers, concrete pad, decontamination equipment and supplies, and the personnel time and equipment to develop the well.
T028	**Log Soil Borings:** This SOW includes personnel time for a Junior Level Professional using a PID to screen and collect samples, and log the well or boring. This Task is to be used when wells are installed or borings advanced using any drilling method.
T030	**Soil Sampling With Hand Auger:** This SOW is for soil sampling not associated with installing a well or a boring. This may be composite sampling, sampling of a waste pile for treatment/disposal certification, sampling from a pit, or samples obtained by hand auguring. The cost for this SOW is based upon personnel time for a Technician, a PID, hand auger with extensions, disposable gloves, bucket, decontamination solution, brush, soap, ice, cooler and express shipping of samples to a lab. This SOW does not include the cost of laboratory analysis of samples collected.
T033	**Survey Monitoring/Recovery Wells:** This SOW consists of personnel time for a Survey Crew Chief and a Survey Rodman, a survey level and tripod to survey monitoring and/or recovery wells for location and elevation. The cost for this SOW includes set-up and relocation time between survey points.
T034	**Survey Property:** This SOW includes personnel time for a two or three-person licensed survey crew, equipment, and survey markers to survey commercial or residential lots to locate property boundaries and to locate remediation equipment. This SOW includes set-up and relocation time between survey points.
T036	**Heavy Equipment Mob/Demob:** This SOW is for the transportation of heavy equipment by trailer and Operators, excluding drill rigs, to a site.

Code	Task
T040	**General Project Management:** This SOW consists of personnel time associated with general project management. General project management includes: project planning, scheduling staff and subcontractor[s], contracting with subcontractors and vendors, routine meetings with responsible parties, and general correspondence with DEQ case manager. The following activities are NOT included in T040 but could be authorized as separate project management labor using an M-code: public meetings, site meetings required by state or local officials, and site visit other than with the RP.
T041	**Well Rehabilitation:** This SOW consists of personnel time for a Technician and a surge blocker used to unclog a monitoring well or recovery well screen. This activity should be performed only when flow between the formation and the monitoring well/recovery well becomes restricted.
T042	**Backfilling:** This SOW consists of backfilling an excavation with rock fill dumped from trucks, placed with a loader. The cost includes all backfill materials, labor, and delivery within 25 miles. The volume of backfill may not exceed the volume of material eligible for reimbursement.
T047	**Reseeding < 1 Acre:** This SOW consists of the personnel time for a Laborer and the materials (including mulch) needed to re-seed any area totaling less than one acre. The cost for this SOW is based on the use of 5.5 pounds of fescue seed per 1,000 square feet and a push-type spreader. This SOW also includes personnel time to mulch the re-seeded areas with hay by hand.
T048	**Reseeding > Or = 1 Acre:** This SOW consists of the personnel time for a Laborer and the materials (including mulch) needed to re-seed any area totaling more than one acre. The cost for this SOW is based on the use of 5.5 pounds of fescue seed per 1,000 square feet and a tractor spreader. This SOW also includes personnel time to apply mulch to the re-seeded areas, with a power mulcher.
T049	**Receptor Survey:** This SOW consists of the identification of potentially affected public and private water supplies (i.e., wells and springs), and surface water within a 1/4 mile radius of the site. Information should be obtained using a local water resource agency and a door-to-door questionnaire. The information obtained should include well ownership, well location, well completion data, well use, and depth to water. This task also includes time for follow-up phone calls to property owners who could not be reached during regular business hours. This includes personnel time for a Senior Technician to sample water supplies and surface water within the survey area.

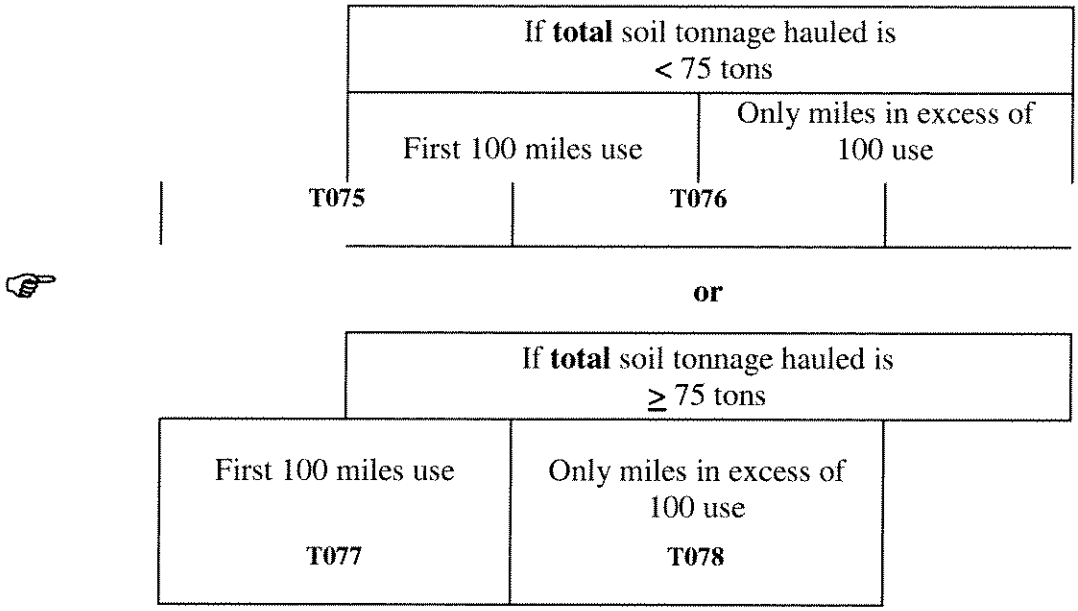
Code	Task
T050	**Soil Gas Survey:** This SOW consists of personnel time for a Mid Level Professional and Senior Technician, equipment and materials to conduct a soil gas survey. This survey will delineate concentrations of volatile organic compounds in soil gas throughout the site. The cost for this SOW is based on the use of a portable GC, soil probe and accessories, rotary hammer drill, generator, Teflon tubing, tedlar bags and pump, and decontamination supplies. The SOW includes on-site analysis of soil gas samples via a laboratory-grade gas chromatograph, and equipment preparation and decontamination. Only successful sample points (i.e., point at which a gas sample is collected and successfully analyzed) are eligible for reimbursement.
T051	**Direct Push Technology (DPT) – Ground Water/Soil Survey:** This SOW consists of personnel time for a two-person DPT crew and the equipment, materials and services necessary to conduct a soil probe survey using direct-push technology such as Hydropunch, Geoprobe, or other comparable technique. This survey will entail the insertion of up to 30 probes throughout the site and the collection of soil and/or ground water samples. Collection of ground water and soil samples, equipment preparation and decontamination, mob and de-mob are included in this task as well as a direct-push rig, probe extensions, a probe tip, probe screens, buckets. Includes materials and cost to abandon probe points with bentonite. This SOW does not include sample analysis. Off-site laboratory analysis is not included in this task but it may be approved and claimed as Time and Materials.
T052	**Ground Penetrating Radar (GPR):** This SOW consists of all personnel time and equipment needed to perform a GPR survey and produce a report describing the results. This includes time for report review, clerical support, and all other direct costs.
T053	**Slug Test:** This SOW includes personnel time for a Junior Level Professional and a Technician and the equipment to conduct a slug test to determine aquifer parameters. The cost of this SOW is based on the use of a polyethylene bailer, rope, and a data logger with one pressure transducer.
T058	**Terrain Conductivity:** This SOW consists of all personnel time and equipment needed to perform a Terrain Conductivity survey and produce a report describing the results. This includes time for report review, clerical support, and all other direct costs.
T064	**Reimbursement Claim Preparation:** This SOW consists of all personnel time for the preparation of a reimbursement claim except small claims (see T114).
T069	**Dual Phase Extraction and Treatment System Mobilization/De-Mobilization:** This SOW is for mobilization to and from the site and encompasses the personnel and use of a tow vehicle and trailer or suitable truck for transport of extraction and treatment components. This task is to be used in lieu of a per mile rate.
T070	**Soil Loading – Up to 2,200 Tons:** This SOW is for the loading of soil from a stockpile into dump trucks for transport. The costs for this SOW are based on the use of a CAT 910 type wheeled loader with a 1.25 cubic yard bucket and an Operator. This Task should be used only for loading quantities up to 2,200 tons.

Code	Task

T071 **Soil Loading – More than 2,200 Tons:** This SOW is for the loading of soil from a stockpile into dump trucks for transport. The costs for this SOW are based on the use of a CAT 926 type wheeled loader with a 2.0 cubic yard bucket and an Operator and a Laborer. This Task should be used only for loading quantities greater than 2,200 tons.

Refer to the table below before requesting authorization for Tasks T075, T076, T077, or T078.

Instructions For Requesting Authorization Of Soil Hauling – T075, T076, T077, and T078: Ton/Miles must be calculated separately for each hauling event. When requesting authorization for this Task, units for both tons and miles must be entered on the AAF. To use the table, first estimate the **total** tonnage to be hauled, then select the proper Task for the distance the soil will be hauled.



Example 1: Request authorization for a single event to haul 90 tons of soil 120 miles for treatment. The quantity to be hauled is greater than 75 tons, therefore T077 and T078 are the only Tasks to consider using. The distance the soil must be hauled exceeds 100 miles, so the first 100 miles will be authorized using T077 and the additional 20 miles will be authorized using T078. The AAF should have listed 90 tons/100 miles under T077 and 90 tons/20 miles under T078.

Example 2: Request authorization for a single event to haul 40 tons of soil 111 miles for disposal. The quantity to be hauled is less than 75 tons, therefore T075 and T076 are the only Tasks to consider using. The distance the soil must be hauled exceeds 100 miles, so the first 100 miles will be authorized using T075 and the additional 11 miles will be authorized using T076. The AAF should have listed 40 tons/100 miles under T075 and 40 tons/11 miles under T076

T075 **Soil Hauling < 75 Tons the First 100 Miles:** This SOW is for hauling less than 75 tons (50 cubic yards) of soil for distances up to 100 miles one way. **For < 75 tons, additional miles above the first 100 miles must be claimed using T076.** When requesting authorization for this Task, units for both tons and miles must be entered on the AAF. The cost for this SOW is based on the use of an 22 ton dump truck, including operating costs, with a driver.

Code	Task
T076	**Soil Hauling < 75 Tons Over 100 Miles:** This SOW is for hauling less than 75 tons (50 cubic yards) of soil, distances of more than 100 miles, one-way. **For < 75 tons, the first 100 miles must be claimed using T075, then all hauling exceeding 100 miles must be claimed using this Task.** When requesting authorization for this Task, units for both tons and miles must be entered on the AAF. The cost for this SOW is based on the use of an 22 ton dump truck, including operating costs, with a driver.
T077	**Soil Hauling ≥ 75 Tons The First 100 Miles:** This SOW is for hauling more than 75 tons (50 cubic yards) of soil, distances up to 100 miles, one-way. **For ≥ 75 tons, additional miles above the first 100 miles must be claimed using T078.** When requesting authorization for this Task, units for both tons and miles must be entered on the AAF. The cost for this SOW is based on the use of a 22 ton dump truck, including operating costs, with a driver.
T078	**Soil Hauling ≥ 75 Tons Over 100 Miles:** This SOW is for hauling more than 75 tons (50 cubic yards) of soil, distances of more than 100 miles, one-way. This Task is used when soils are hauled more than 100 miles. **For ≥ 75 tons, the first 100 miles must be claimed using T077, then all hauling exceeding 100 miles must be claimed using this Task.** When requesting authorization for this Task, units for both tons and miles must be entered on the AAF. The cost for this SOW is based on the use of a 22 ton dump truck, including operating costs, with a driver.
T079	**Well Installation Using Air Rotary – Two-Inch Well:** This SOW is for the installation of two-inch PVC monitoring wells. The cost for this SOW is based on the cost for drilling using a drill rig capable of air rotary drilling, all well completion materials, watertight locking manhole covers, concrete pad, decontamination, and the personnel time and equipment to develop the well. This Task does not include the cost to log the well, screen and collect soil samples (see T028). **Cost is $61.00 per Linear Foot of Well.**
T080	**Well Installation Using Air Rotary – Four-Inch Well:** This SOW is for the installation of four-inch PVC monitoring wells. The cost for this SOW is based on the cost for drilling using a drill rig capable of air rotary drilling, all well completion materials, watertight locking manhole covers, concrete pad, decontamination, and the personnel time and equipment to develop the well. This Task does not include the cost to log the well, screen and collect soil samples (see T028).
T081	**Well Installation Using Air Rotary – Six-inch Well:** This SOW is for the installation of six-inch PVC monitoring wells. The cost for this SOW is based on the cost for drilling using air rotary drilling, all well completion materials, watertight locking manhole covers, concrete pad, decontamination, and the personnel time and equipment to develop the well. This Task does not include the cost to log the well, screen and collect soil samples (see T028).
T082	**Well Abandonment – Two-inch Well:** This SOW is for the abandonment of a two-inch monitoring well. This SOW includes the personnel time and equipment to remove a manhole, protective cover, vault, and riser. The cost for this SOW is based on the personnel time for a laborer and Senior Technician and the use of a 30' tremmie pipe, funnel, small hand tools, and bentonite and cement slurry. This Task does not include removal of subsurface screen or casing or the equipment, time, and labor needed to remove vaults or manholes set in concrete or pavement.

Code	Task
T083	**Well Abandonment – Four-inch Well**: This SOW is for the abandonment of a four-inch monitoring well. This SOW includes the personnel time and equipment to remove a manhole, protective cover, vault, and riser. The cost for this SOW is based on the personnel time for a laborer and Senior Technician and the use of a 30' tremmie pipe, funnel, small hand tools, and bentonite and cement slurry. This Task does not include removal of subsurface screen or casing or the equipment, time, and labor needed to remove vaults or manholes set in concrete or pavement.
T084	**Well Abandonment – Six-inch Well:** This SOW is for the abandonment of a six-inch monitoring well. This SOW includes the personnel time and equipment to remove a manhole, protective cover, vault, and riser. The cost for this SOW is based on the personnel time for a laborer and Senior Technician and the use of a 30' tremmie pipe, funnel, small hand tools, and bentonite and cement slurry. This Task does not include removal of subsurface screen or casing.
T085	**Pump Test:** This SOW is for conducting a pump test to determine aquifer characteristics. The cost for this SOW is based on the personnel time for a Mid Level Professional and a Technician. It also includes the use of an oil/water interface probe, a two-inch total fluids pump, a 4 kW generator, a multi-channel data logger with three pressure transducers, and decontamination supplies. This Task does not include the cost for a drum or tank to collect pumped water, water disposal costs, or the time for data analysis and write-up.
T086	**Domestic Well Sampling:** This SOW is for sampling of domestic water supplies. The cost for this SOW is based on the personnel time for a Technician to collect samples from the tap of a residence. It also includes the cost for ice, a cooler, disposable gloves, and express shipping of samples to a lab. This SOW does not include the cost for laboratory analysis of samples collected.
T087	**Surface Water Sampling:** This SOW is for sampling of surface waters. The cost for this SOW is based on the personnel time for a Technician to collect samples from surface water. It also includes the cost for ice, 5-gallon polyethylene bucket, a cooler and express shipping of samples to a lab. This SOW does not include the cost for laboratory analysis of samples collected.
T088	**Direct Push Technology (DPT) Permanent Well Installation:** This SOW includes the personnel and all materials necessary to install permanent PVC monitoring wells using direct-push technology such as Hydropunch or Geoprobe. It includes the cost for PVC well casing and screen, well completion materials, supplies, and all decontamination supplies. Cost for DPT crew, rig, and mob/demob, must be claimed using T051: Direct Push Technology (DPT) – Ground Water/Soil Survey.
T097	**Replacement Of Patio/Walkway Type Pavements:** This SOW is to be used for the replacement of sidewalks, patios, and walkways constructed of brick, slate, tile, terrazzo, pavers, stone, or other architectural materials. The cost for this SOW is based on the personnel time for a cement finisher and two Laborers. The use of this Task is limited to areas less than 600 square feet.
T098	**Silt Fencing Installation:** This SOW is for placement of polypropylene silt fencing and securing it with stakes or rebars driven into the ground at ten foot intervals. The cost for this SOW is based on personnel time for two Laborers, woven silt fencing, rebars or stakes, and necessary installation equipment.

Code	Task
T100	**Report Preparation:** This SOW is for preparation of all written reports, such as Initial Abatement Reports, Site Characterization Reports, Health And Safety Plans, Closure Reports, report Addenda, etc. The cost for this SOW includes all personnel time for writing report text; data analysis time; preparing sketched maps and figures to be prepared by a CAD operator; translating field notes into tables/figures/boring logs/well construction diagrams; analyzing slug test data; simple ground water flow modeling and fate and transport modeling, e.g. Bioscreen, Bioplume 3, Solute, etc.; simple hydrologic calculations; sketching iso-concentration maps to be prepared later by a CAD operator; integrating field data with background site data. Also includes the cost for support activities such as peer review and all copying and binding costs. Authorize hours for this Task based only upon the estimated time necessary for a project manager, senior, mid, and junior level professionals to draft, edit, and review a report. For each hour of report writing authorized the Task includes additional time and cost for preparation of maps, graphics, tables, copying, binding, etc. This Task does not cover field work; complex modeling requiring significant hours, e.g. Modflow; exceptional geologic research; the preparation of engineering plans and specs, or work specifically covered under another T-Code.
T101	**Spent Carbon Changeout:** This SOW is for removal of spent, non-hazardous carbon from an adsorber, refilling the adsorber with carbon, transport of the spent carbon to a licensed reactivation facility, and reactivation of the spent carbon. This SOW includes the cost for all labor, equipment, and materials necessary to remove, replace, transport, and reactivate spent carbon.
T114	**Small Reimbursement Claim Preparation:** This SOW is for the personnel time and materials to prepare a small reimbursement claim. This SOW applies to all Category 1 and Category 2 heating oil tank claims. It also applies to Category 3 heating oil tank and regulated tank claims consisting of fewer than 10 line items on the Claim Worksheet.
T115	**Small UST Pump-Out:** This SOW is for removal of residual product and sludge from USTs that does not utilize a vac truck. It includes all necessary equipment and personnel to remove product and sludge from small underground tanks.
T116	**Site History Research:** This SOW is for the personnel time for a Mid-Level Professional to research past activities that have occurred at or near the site relating to petroleum storage and releases. This SOW includes interviews, deed research, location of tank system(s), tank history, and tank/property ownership history. This Task is for research only; information derived from this research should be included in reports submitted to the DEQ and authorized under T100. The cost for this SOW also includes the cost for government fees and documents. If more in data is required, use M1673 to authorize the cost of environmental database research, radius maps, Sanborn Maps®, or aerial photographs.
T117	**Monitoring Well Sampling – One-Inch Diameter:** This SOW consists of personnel time for a Technician and equipment to sample a one-inch monitoring well. The cost also includes personnel time for preparation, well purging, sample packing, necessary decontamination, and travel time between wells on site. Equipment includes a polyethylene bailer, nylon rope, an oil-water interface probe, a pH meter, a conductivity meter, a thermometer, disposable gloves, a brush, soap, decontamination fluids, ice, a cooler, and express shipping of samples to a lab. This SOW does not include laboratory analysis of samples collected.

Code	Task
T118	**Monitoring Well Sampling – Two-Inch Diameter:** This SOW consists of personnel time for a Technician and equipment to sample a two-inch monitoring well. The cost also includes personnel time for preparation, well purging, sample packing, necessary decontamination, and travel time between wells on site. Equipment includes a polyethylene bailer, nylon rope, an oil-water interface probe, a pH meter, a conductivity meter, a thermometer, disposable gloves, a brush, soap, decontamination fluids, ice, a cooler, and express shipping of samples to a lab. This SOW does not include laboratory analysis of samples collected.
T119	**Monitoring Well Sampling – Four-Inch Diameter:** This SOW consists of personnel time for a Technician and equipment to sample a four-inch monitoring well. The cost also includes personnel time for preparation, well purging, sample packing, necessary decontamination, and travel time between wells on site. Equipment includes a polyethylene bailer, nylon rope, an oil-water interface probe, a pH meter, a conductivity meter, a thermometer, disposable gloves, a brush, soap, decontamination fluids, ice, a cooler, and express shipping of samples to a lab. This SOW does not include laboratory analysis of samples collected.
T120	**Site Access Agreement:** This SOW is for preparation and execution of an agreement to gain access to property owned by a third party. This task will not be authorized for access to property that was previously owned or leased by the responsible person at the time the release was reported. This SOW includes personnel time for a Project Manager and Senior Level Professional to review a Site Access Agreement and present it to a property owner/lessor (a least two attempts at presenting the agreement for signature must be made). This SOW also includes personnel time for Clerical staff to prepare the document. The Regional Office must be notified immediately upon failure to obtain a signed Access Agreement.
T121	**Excavating/Trenching:** This SOW is for excavating interceptor/recovery trenches, soils around foundations, buried pipelines, tanks, and sites with difficult access or obstructions, etc. The cost for this SOW is based on the use of a tracked excavator with up to 15 foot maximum digging depth, a 1 cubic yard bucket and bucket, operator, operating costs, and laborer.
T122	**Bulk Excavation:** This SOW is for excavation at sites with unobstructed access and/or bulk or mass quantity excavation. The cost for this SOW is based on the use of tracked excavator with up to 26.5 maximum digging depth, a 2-cubic yard bucket, operator, operating costs, and laborer.
T123	**Asphalt Pavement Removal – Up to 6" Thick, Less Than 1,000 SF:** This SOW includes the personnel time for a Foreman and Laborers using hand held pneumatic breakers to breakup and remove asphaltic pavement that is up to 6" thick and areas less than 1,000 square feet. The cost for this SOW includes the use of an air compressor, air hoses, and air tools with bits. This SOW does not include the costs for loading, hauling, or disposing of demolished pavement.
T124	**Asphalt Pavement Removal – Up to 6" Thick, Greater Than 1,000 SF:** This SOW includes the personnel time for a Foreman and Laborers using hand held pneumatic breakers to breakup and remove asphaltic pavement that is up to 6" thick and areas greater than 1,000 square feet. The cost for this SOW includes the use of an air compressor, air hoses, and air tools with bits. This SOW does not include the costs for loading, hauling, or disposing of demolished pavement.

Code	Task
T125	**Concrete Pavement Removal – Up to 6" Thick, Steel Mesh Or Rod Reinforced, Less Than 1,000 SF:** This SOW includes the personnel time for a Foreman and Laborers using held pneumatic breakers to break up and remove reinforced concrete pavement up to 6" thick and areas less than 1,000 square feet. The cost for this SOW includes the use of an air compressor, air hoses, and air tools with bits. This SOW does not include costs for loading, hauling, or disposing of demolished pavement.
T126	**Concrete Pavement Removal – Up to 6" Thick, Steel Mesh Or Rod Reinforced, Greater Than 1,000 SF:** This SOW includes the personnel time for a Foreman and Laborers using held pneumatic breakers to break up and remove reinforced concrete pavement up to 6" thick and areas less than 1,000 square feet. The cost for this SOW includes the use of an air compressor, air hoses, and air tools with bits. This SOW does not include costs for loading, hauling, or disposing of demolished pavement.
T127	**Removal of Patio/Walkway Type Pavement:** This SOW is to be used for the removal of sidewalks, patios, and walkways constructed of unreinforced concrete, brick, slate, tile, terrazzo, pavers, stone, or other architectural materials. This SOW includes the personnel time for a Foreman and Laborers using a hand-held pneumatic breaker to break up and remove the pavement. The cost for this SOW includes the use of an air compressor, air hoses, and air tools with bits. The use of this Task is limited to areas less than 600 square feet.
T128	**Asphalt Paving:** This SOW is for paving with asphalt. This cost includes a Foreman and laborers to put down a base layer, subgrade, and wearing course. The SOW also includes the cost for an asphalt paver and steel wheel roller to rough and fine grade, and compact the paved areas.
T129	**Concrete Paving – Driveways And Lots:** This SOW is for replacing concrete pavement including driveways, patios, sidewalks, parking lots, etc. which has been removed for the purposes of remediation or investigation. The cost for this SOW is based on the personnel time for a Cement Finisher and two Laborers and includes the cost for 3,000 PSI concrete up to 6" thick, with wire mesh, broom finishing, and a gravel base compacted with a vibrating compactor.
T130	**Vacuum Excavation of Test Holes (Subsurface Utility Engineering Quality Level A, 3D):** This SOW is for the personnel and equipment necessary for a professional crew to locate subsurface utilities and obstructions using non-destructive digging equipment to determine the precise horizontal and vertical position of underground utilities, as well as the type, size, condition, material, and other characteristics prior to drilling or excavating. Underground utilities and objects are located vertically and horizontally. Cost includes crew and mobilization to site. Also includes locating subsurface utilities on existing maps, does not include generating original map. Hourly minimums may apply.
T131	**Subsurface Line Location (Subsurface Utility Engineering Quality Level B, 2D):** This SOW consists of personnel time and equipment for a professional crew to review plans and mark the location of all underground utilities including product, electric, gas, water, and sewer lines as well as subsurface tanks and structures associated with the contaminated site. Two-dimensional mapping information is obtained using surface geophysical techniques. The SOW includes the cost to locate utilities on existing site maps and notes to support subsequent investigative and remedial activities. This task cannot be claimed when using free services such as Miss Utility. Hourly minimums may apply.

Code	Task
T132	**Subsurface Line Location:** This task is for locating and marking in the field any buried private or public utility lines that may be within or adjacent to the proposed dig area which are not located by the local one-call utility locating center. The professional locator will use industry standards and accepted practices to mark in the field any buried conductors that are detected within, or adjacent to, the dig area. Buried lines will be marked with paint, flags, or stakes as required. No map will be generated by the Locator. If utility map of marked conductors is required, additional labor hours will be approved as appropriate. This task code does not include time for the consultant to meet with the Locator. Hourly minimums may apply.
T133	**Grab Soil Sampling:** This SOW is for collecting a grab soil sample. The SOW includes but is not limited to collecting a grab surface soil sample, a grab sample from a waste pile, pit, or backhoe or excavator bucket. The cost for this SOW is based upon personnel time for a Technician, a PID, ice, cooler, and express shipping of samples to a lab. This SOW does not include the cost of laboratory analysis of samples collected.